INSECTS IN MONTANA

Other Insects

Montana is an area with a great diversity of insect life. A majority of the insects in Montana are relatively neutral, with a few pest insects requiring control efforts on a regular basis, a few additional pests requiring occasional control, and some species actually being beneficial, either through products (honeybees or alfalfa leafcutting bees) or through their action on other insects (parasites of the various pest insects) or agents for the biological control of weeds.

Grasshoppers

Montana is a large state with a large number of grasshopper species. However, only about 15 to 20 of the approximately 100 species potentially present in the state actually cause economic damage. http://www.sdvc.uwyo.edu/grasshopper/ghwywfrm.htm The species most likely to cause damage to rangeland are not necessarily the same as the species likely to damage cropland, although the members of the genus *Melanoplus* (spur-throated grasshoppers) are more likely to be found in either situation, as well as in suburban situations. An additional species, *Camnula pellucida*, is also a pest in certain parts of the state. Local areas can develop grasshopper control districts, as detailed in the 7-22-2301, MCA.

Control of grasshoppers can best be achieved via an IPM approach. Scouting early in the spring to determine where egg beds are is a good way to reduce the area that needs to be treated. In this approach, close examination of the ground reveals the early instar nymphs hopping around. These are usually less than ¼ inch long, and may look like some other sort of plant bug. Treatment with a material such as diflubenzuron, which inhibits the formation of chitin, can be very effective at this time. However, finding the egg beds requires some knowledge of the individual species, as their specific requirements for oviposition vary. This means that the species most likely to develop into a problem in an area needs to be known in advance.

There are other insecticides available for use against grasshoppers in particular situations. To determine which materials will best suit a situation, it is necessary to read the labels. Additional information is available from Montana State University Extension personnel. As always, read and follow the label directions.

The USDA monitors grasshopper populations throughout the Western United States and makes the results of their monitoring available through risk maps. These maps can be found at: http://fs-sdy2.sidney.ars.usda.gov/grasshopper/Extras/. These can help determine if extra efforts in scouting for grasshoppers are justified. At times, the only real approach to a grasshopper problem may be a large-scale action. In the case of land that is owned or administered by the Federal Government, the USDA-APHIS-PPQ may be able to assist in the logistics and even costs of a program. At the county level, a pest control district can be formed, and if grasshopper problems are a consistent problem, this may be well worth the additional time and effort. For more information go to: 80-7-501, MCA.

Cereal Leaf Beetle

The Cereal Leaf Beetle (*Oulema melanopus*) is an introduced pest of cereal grains. Regulatory controls are in place to slow the spread of this pest, which reduces grain yield due to larval feeding on the flag leaf. In Montana, adult beetles may cause economic damage to newly emerging spring grains when they feed on the first leaf to the extent that it is destroyed. Extensive efforts to introduce and distribute parasitoids of the CLB have been made by USDA-APHIS-PPQ and other agencies. The parasitoid *Tetrastichus julis* is established at several Montana locations. Another parasitoid, *Anaphes flavipes*, which attacks the eggs, has also been found in the state. Both of these agents are assisting in keeping CLB at under economic levels in the state, as is the climate in most of the state. This insect seems to prefer slightly higher humidity than is generally found in most of Montana.

There is a quarantine, which regulates movement of certain commodities from areas where CLB is found to areas without the pest.